

REMARKS

In the Office Action of July 6, 2005, claims 1, 2, 6, 9, 10 and 15-18 were rejected under § 102(b) as being anticipated by *Hiltmann et al.* A translation of this reference has not been obtained; however, the English Abstract indicates that *Hiltmann* is directed to a stacking machine for folded up-ended paper sheets. The Abstract and the drawing disclose a means for decelerating or braking the downward movement of a series of paper sheets. This means is comprised of the pair of braking rollers 2,3 which are both horizontally moveable toward each other with a paper sheet positioned therebetween and which are both driven via a common motor M.

Each of the independent claims 1, 9 and 15 has been amended to clearly distinguish from *Hiltmann* in view of § 102. Specifically, independent claims 1 and 15 have been amended to require the sheet deceleration apparatus to include a driven roller and a non-driven roller. This clearly distinguishes from *Hiltmann* in which both of the braking rollers 2,3 are driven. In fact, *Hiltmann* discloses both rollers 2,3 being driven by a common motor M. Accordingly, this rejection has been overcome and reconsideration is respectfully requested. It would not have been obvious to drive only one of the rollers 2,3 or to move only one of such rollers since this would be contrary to the clear teachings of *Hiltmann*.

Claims 1-6, 9-12 and 15-18 were rejected under § 102(b) as being anticipated by *Frye et al.* The Frye reference is directed to an apparatus for slowing cut size sheets of paper and discloses several embodiments for doing so. The embodiment on which the above rejection is based is the embodiment illustrated in and described with respect to Figure 4. This embodiment includes a slowly rotating roll 192 and an oscillating, spring-loaded nip wheel 172. The nip wheel 172 is rotatably carried on the end of an arm 174 which is continuously biased downwardly by spring means 178 against the roll 192. The arm 174, and thus the nip wheel 172, is selectively urged upwardly by the retracting piston 180. When it is desired for the nip wheel 172 to move toward and press against the roll 192, the retracting piston 180 is released and the bias of the spring 178 causes the wheel 172 to move downwardly to press the tail of the advancing sheet against the rotating roll 192.

Frye has been carefully considered and each of the independent claims has been amended to clearly distinguish from *Frye* under § 102. Specifically, independent claim 1 has been amended to require, among other things, a drive mechanism comprising a servo drive for moving

the moveable roller from its retracted position to its extended position and for moving the moveable roller from its extended position to its retracted position. This is clearly distinguishable from *Frye* in which the wheel 172 is moved away from the roll 192 upon actuation of the retraction cylinder 180 and is moved toward the roll 192 via the bias of the spring 178 when actuation of the cylinder 180 is released. Thus, not only does *Frye* fail to have a servo drive as now required by claim 1, the wheel 172 is moved toward and away from the roll 192 in a manner significantly different than that recited in claim 1.

Independent claim 9 has been amended to require the sheet deceleration apparatus to have a driven roller assembly comprised of a plurality of laterally spaced driven rollers and a non-driven roller assembly comprised of a plurality of laterally spaced non-driven rollers in which the non-driven rollers are moveable toward and away from corresponding ones of the driven rollers. This is not shown in *Frye*. In contrast, the device of *Frye* includes what appears to be a single roll 192 and a single nip wheel 172 which is moved toward and away from the roll 192. There is no disclosure whatsoever that either the roll 192 or the wheel 172 is comprised of a plurality of laterally spaced rolls or wheels. In fact, page 9 of *Frye* discloses the rotating roll 192 as being of a vacuum roll type with an interior evacuated by blower means 196 and having a plurality of spaced openings 198 therethrough. This would teach against a plurality of rollers. Accordingly, claim 9 is clearly distinguishable from *Frye* with respect to § 102.

Independent claim 15 has been amended to require the step of driving one of the rollers toward the other with a servo drive which is comprised of a servo motor and a drive linkage. As indicated above with respect to independent claim 1, *Frye* neither discloses a servo drive comprised of a servo motor and a drive linkage nor does it disclose driving one of the rollers toward the other with such servo drive. In *Frye*, this movement of the wheel 172 and the roller 192 toward one another is accomplished via the bias of the spring 178 and the release of the piston 180.

Accordingly, independent claims 1, 9 and 15 are clearly distinguishable from *Frye* relative to § 102 and reconsideration is respectfully requested.

Claim 9 was rejected under § 103(a) as being unpatentable both over *Hiltmann* and over *Frye*. In this respect, the Examiner's position was that both *Hiltmann* and *Frye* teach everything except being employed with a rotary press. As indicated above, however, in view of the present

amendments, this is no longer true. Accordingly, these rejections under § 103 have been overcome.

Finally, claims 7, 8, 13, 14 and 20 have been rejected under § 103(a) both over *Hiltmann* in view of *Villacieros Fernandez* and over *Frye* in view of *Villacieros Fernandez*. In these rejections, the Examiner's position is that *Hiltmann* and *Frye* teach everything except a servo motor and drive linkage assembly to move the roller to be moved toward the other roller and except for the rollers comprising a plurality of laterally spaced rollers.

The *Villacieros Fernandez* patent has been carefully considered and amendments have been made to each of the independent claims to clearly distinguish from the primary references of *Hiltmann* and *Frye*, both individually and in combination with *Villacieros Fernandez*. Accordingly, reconsideration is respectfully requested in view of the following comments.

Although the *Villacieros Fernandez* patent relates generally to a machine for reducing the velocity of carton blanks as they are discharged from a conveyor, the manner in which this is done is entirely different from the mechanisms disclosed in *Hiltmann* and in *Frye*. In fact, to the extent *Villacieros Fernandez* discloses use of a servo motor and to the extent it discloses a plurality of laterally spaced rollers, the use of those elements in *Villacieros Fernandez* is significantly different from those elements of the present invention. Thus, for the reasons discussed below, it would not be appropriate to combine the teachings of *Villacieros Fernandez* with the *Hiltmann* or *Frye* references.

As shown in Figure 1 of *Villacieros Fernandez*, a stacker conveyor 10 is pivotable between a lower position shown in the solid lines and a raised position shown in broken lines. The discharge end of the stacker conveyor 10 carries the means, shown best in Figures 2-5, for reducing the velocity of the blanks as they are discharged from the conveyor. This velocity reducing means includes the oversized wheels 46 and the drag belt assemblies 60. The wheels 46 are driven by a variable speed motor 50 at speeds less than the line speed of the belts 32 driven by the motor 29. The drag belt assemblies 60 (Figures 3, 4 and 5) are non-driven and are in continuous engagement with the wheels 46. Thus, the drag belt assemblies 60 are not moveable between a retracted position and an extended position. Thus, although *Villacieros Fernandez* shows a plurality of laterally spaced rollers as the Examiner has indicated, such rollers are in continuous contact and are not moveable between a retracted position in which the corresponding rollers are spaced from one another and an extended position in which the rollers

are capable of nipping a sheet between them as now required in the amended claims. Thus, even if *Villacieros Fernandez* was considered to be analogous art, a modification of either *Hiltmann* or *Frye* as shown by *Villacieros Fernandez* would result in a structure which would fail to meet the language of the claims. Further, *Villacieros Fernandez* only shows a single set of laterally spaced rollers, namely, the wheels 46. The drive belt assemblies 60 are not rollers at all, but rather are in fact, elongated drag belts which are mounted to the pair of rollers 64 and 66. Thus, for this further reason, modification of either *Hiltmann* or *Frye* in accordance with *Villacieros Fernandez* would not result in a structure meeting the language of the amended claims nor would such a modification have been obvious.

The servo motor that is disclosed in *Villacieros Fernandez*, and upon which the Examiner has relied, is the motor (not actually shown in *Villacieros Fernandez*) that drives the threaded shaft 84 (Figures 3 and 4) via the coupling 86 and the right angle gear drive 88. The only purpose of this servo motor in *Villacieros Fernandez* is to rotate the threaded shaft 84 in order to adjust the angle at which the drag assemblies 60 are disposed relative to the discharge conveyor. This angle adjustment defines the exit angle of the blanks as the trailing edge of each blank leaves contact with the wheels 46 and the drag belts 62 of the drag assemblies 60. The servo motor disclosed in *Villacieros Fernandez* is not for the purpose of moving the moveable rollers between their respective retracted and extended positions as required by the presently amended claims. Instead, the servo motor disclosure in *Villacieros Fernandez* is used for a completely different purpose than that required by the present claims. Accordingly, there is no disclosure or suggestion that the servo motor of *Villacieros Fernandez* could be substituted for the braking motors 2, 3 of *Hiltmann* or the retraction piston 180 and spring 178 of *Frye*.

Accordingly, independent claim 1 which now requires, among other things, a driven roller and a non-driven roller and a drive mechanism comprising a servo drive for moving the moveable roller from its retracted position to its extended position and for moving the moveable roller from its extended position to its retracted position is clearly distinguishable from the prior art, both individually and in combination and is thus patentable.

Independent claim 9 which requires, among other things, a driven roller assembly comprised of a plurality of laterally spaced driven rollers and a non-driven roller assembly comprised of a plurality of laterally spaced non-driven rollers, with the non-driven rollers being moveable toward and away from corresponding ones of the driven rollers between retracted and

extended positions (as defined) and between the extended and retracted positions (as defined) is not shown in any of the references, either individually or in combination. Accordingly, independent claim 9 is allowable.

Independent claim 15 is a method claim which requires, among other things, delivering a sheet of material between a driven roller and a non-driven roller and driving at least one of the rollers toward the other with a servo drive to nip the sheet of material during at least a portion of the sheet travel in which the servo drive is comprised of a servo motor and a drive linkage positioned between the servo motor and at least one said roller. Again, none of the prior art references either individually or in combination disclose such a method. Accordingly, claim 15 is considered to be allowable.

The various dependent claims include all of the limitations of their respective independent claims and are thus considered allowable for the same reasons.

For all of the above reasons, and in particular in view of the amendments to the claims, the discussion of the prior art references and the distinctions between the amended claims and such references, it is submitted that all of the claims are in condition for allowance and such action is respectfully requested.

Respectfully submitted,

DORSEY & WHITNEY LLP

Date: Oct. 11, 2005

By: David N. Fronek
David N. Fronek
Reg. No. 25,678
Suite 1500
50 South Sixth Street
Minneapolis, MN 55402-1498
(612) 340-2629